MULTIMEDIA UNIVERSITY®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2016/2017

DPA5018 – PROGRAMMING FOR BUSINESS APPLICATIONS

(DIT & DBIS)

1 MARCH 2017
9.00 a.m - 11.00 a.m
(2 Hours)

INSTRUCTIONS TO STUDENT:

1. This booklet consists of 7 pages.
2. **SECTION A**: Answer **ALL** questions on the OMR sheet provided.
3. **SECTION B**: Answer **ALL** questions on the OMR sheet provided.
4. **SECTION C**: Answer **ALL** questions in the answer booklet provided.

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ) (10 Marks)

Instruction: *Answer all the questions in this section and shade your answers on the OMR sheet provided.*

1. A *Case* that handles all values larger than a specified value must precede the > operator with _____ keyword.

   a. Select
   b. Is
   c. Case
   d. All

2. The Do…Loop Until statement checks the loop-termination condition _____.

   a. for False after the body executes
   b. for False before the body executes
   c. for True after the body executes
   d. for True before the body executes

3. Which of the following headers will cause the body not to execute at least once?

   a. For i As Integer = 1 To 10 Step 10
   b. For i As Integer = 1 To 10 Step 2
   c. For i As Integer = 10 To 1 Step -1
   d. For i As Integer = 10 To 20 Step -1

4. What is the default tab index of the first object placed on a form?

   a. 0
   b. 1
   c. First
   d. Start

5. To get the number of items stored in a ListBox, use the _____ property.

   a. Items.Add
   b. Items.Index
   c. Items.Number
   d. Items.Count

6. Passing an argument to a sub or procedure by default provides the method with _____.

   a. the address of the value in memory.
   b. a separate copy of the value.
   c. the type of the value.
   d. the same copy of the value.

7. If method IndexOf does not find the specified substring, it returns _____.

   a. 0
   b. -1
   c. False
   d. Nothing

Continued ...

8. Methods from the _____ class can be used to write data to a file.

   a. StreamWrite
   b. FileWriter
   c. StreamWriter
   d. WriteFile

9. Based on the array declaration below, which of the following is the correct statement to replace "Malaka" with "Melaka"?

```
Dim states(2) As String = {"Kedah", "Malaka", "Johor"}
```

   a. states(1) = "Melaka"
   b. states(2) = "Melaka"
   c. states[1] = "Melaka"
   d. states[2] = "Melaka"

10. _____ allows individual controls such as text boxes and labels to be linked to and automatically display the contents of a data source.

   a. Data binding
   b. Table adapter
   c. Data grid
   d. Data relation

Continued ...

SECTION B: TRUE or FALSE (10 Marks)

Instruction: *Answer all the questions in this section and shade your answers* ***(A for TRUE and B for FALSE)*** *on the OMR sheet provided.*

1. If its continuation condition is initially False, a *Do...Loop While* repetition statement will never execute.

2. Multiple values in a range can be tested in the *For...Next* statement using the *To* keyword.

3. The value of *cboBox.Text* is the currently highlighted item.

4. The position number in square brackets in an array declaration is formally called an index.

5. An array can contain both numeric and string values.

6. Multiple values can be tested in a `Case` statement where the values are separated by commas.

7. The input to a user-defined function can consist of one or more values.

8. If the Boolean expression A is True and B is False, the value of the logical expression A Or B is False.

9. Opening a file for output means that anything that appears as output on the screen is written to the disk.

10. Given the statement str = "You can do it!", the statement str.Substring(4,3) will return the value "can".

Continued ...

SECTION C: STRUCTURED QUESTIONS (80 Marks)

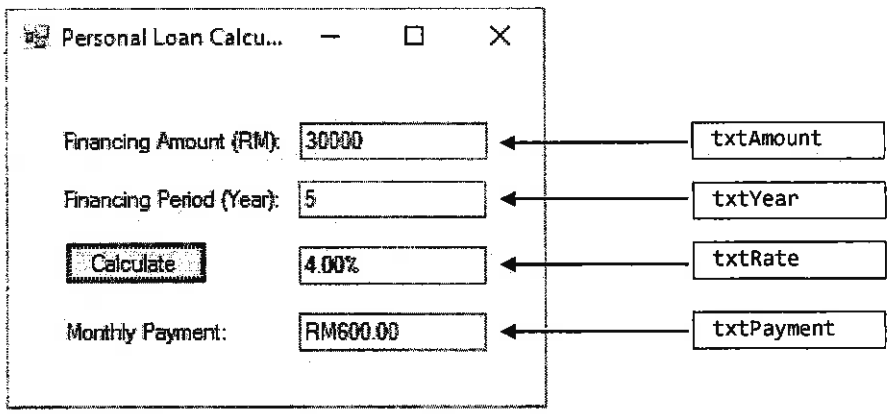
Instruction: *Answer all the questions in this section and write your answers in the answer booklet provided.*

QUESTION 1 (20 Marks)

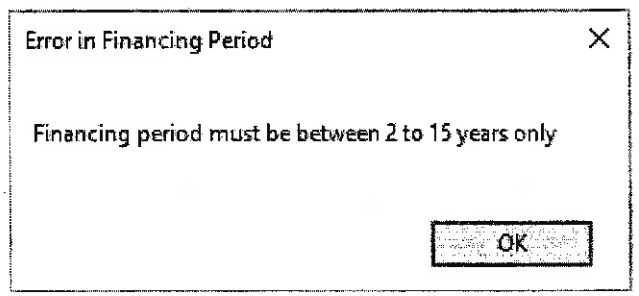
This application calculates the monthly payment for a personal loan. The interest rate is determined based on the financing period as shown in the table below.

Financing Period	Interest Rate
Minimum of 2 years up to 4 years	3.80%
5 years	4.00%
6 years	4.02%
7 years	4.05%
8 years	4.10%
9 years and up to maximum of 15 years	4.50%

- User will key in the Financing Amount and the Financing Period.
- When the *Calculate* button is clicked, the respective Interest rate and the monthly payment will be displayed as the output.
- Based on the sample output below the monthly payment is calculated as (30000 * (1 + (0.04 * 5 years)) / 60 months).



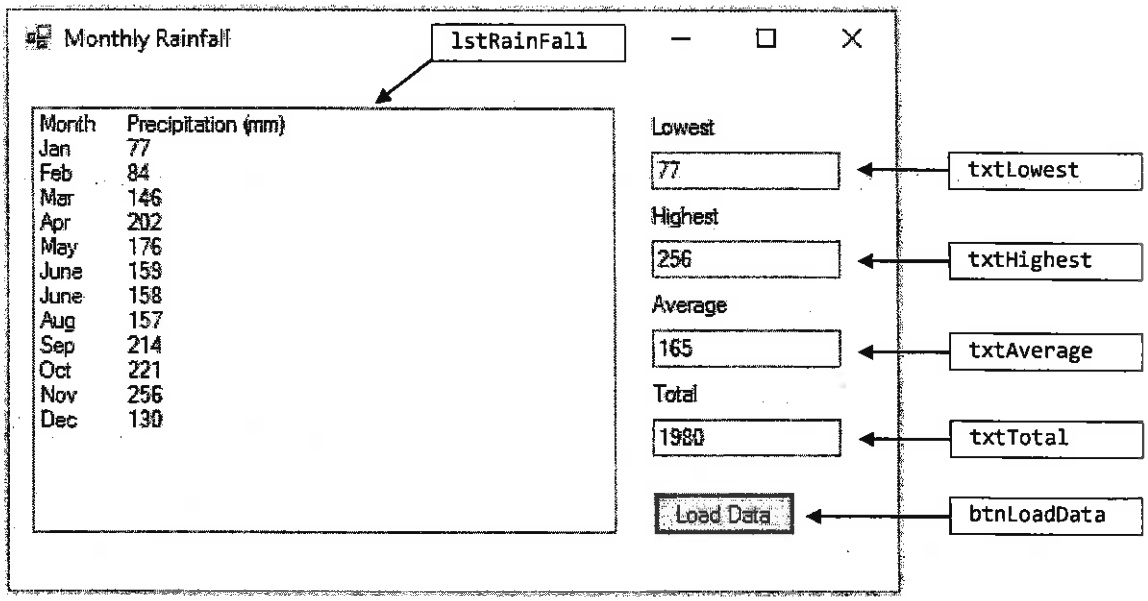
- If the user keyed in Financing Period not according to the terms and conditions, which is between 2 to 15 years, a message box will appear as shown below.



Continued ...

QUESTION 2 (20 Marks)

Create a Window application that extracts data from csv formatted text file named *Rainfall.txt*. When the Load Data button (*btnLoadData*) is clicked, data from Rainfall.txt will be displayed into the listbox (*lstRainFall*).



- Below is the content of the Rainfall.txt text file

```
Jan,77
Feb,84
Mar,146
Apr,202
May,176
June,159
June,158
Aug,157
Sep,214
Oct,221
Nov,256
Dec,130
```

- Use Do…While loop to read the content of the text file into the listbox *lstRainFall*. The numbers value represents the amount of rain or precipitation measured in millimetres (mm) and also need to be stored in an array named *rains()*.
- Use For…Each looping statement to get the total amount of rain for the whole year from *rains()* array.
- Calculate the average and display the output.
- Use appropriate array function to find the largest and smallest value in the array and display them in the respective textboxes.

Continued ...

QUESTION 3 (20 Marks)

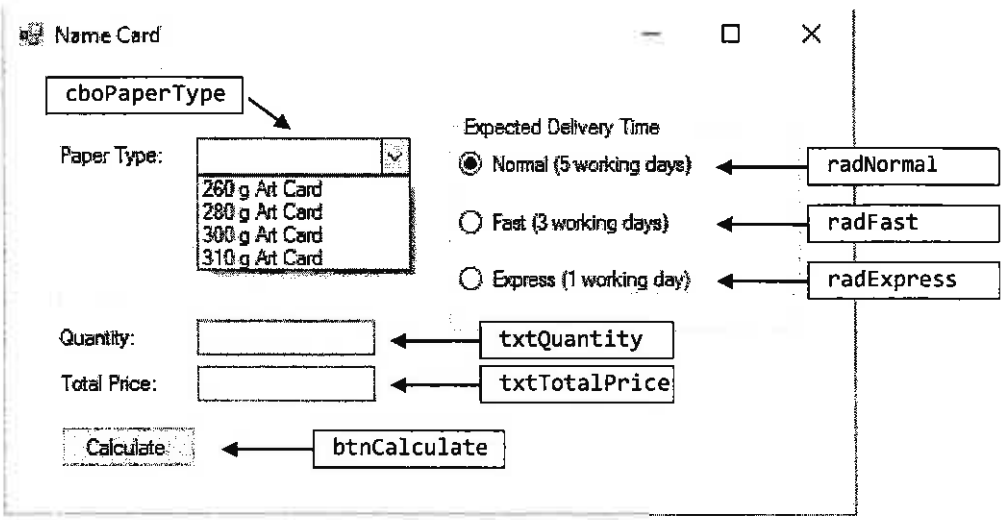
This Windows Form application records the name card order made by customers. The user will select the paper type, quantity and determine expected delivery. When the user clicked the Calculate button (*btnCalculate*), the total price amount will be displayed in the textbox (*txtTotalPrice*).

The table below shows the price for 100 pieces' name cards based on paper type.

Paper Type	Price (per 100 pc)
260 g Art Card	RM 9.04
280 g Art Card	RM 10.22
300 g Art Card	RM 11.87
310 g Art Card	RM 17.13

By default, the name card will be delivered in 5 working days without any extra charge. However, if user selected a fast delivery time, the total price will be increased by 25%. A 50% increase in price will be charged if the customer requires the card in one working day by selecting the Express Delivery Time.

1. You need to write two functions:
   a. *Calc_PaperTypePrice(pt As String)* function will have one parameter to accept one string argument from *btnCalculate* sub procedure containing the selected value from the combo box. Use the Select…Case statement to determine the price according to the Paper Type selected and return the value containing the Paper Type price. If no Paper Type is selected, a message box will appear reminding the user to select a Paper Type.
   b. *Calc_DeliveryPrice()* function will check which radio button is selected by using the *If...ElseIf..End If* statement. By default, radio button (*radNormal*) is selected and the function will return value 0 because, no additional charge will be applied for normal delivery. Consequently, if radio button (radFast) is selected, value 0.25 will be returned and if radio button (radExpress) is selected, value 0.50 will be returned.



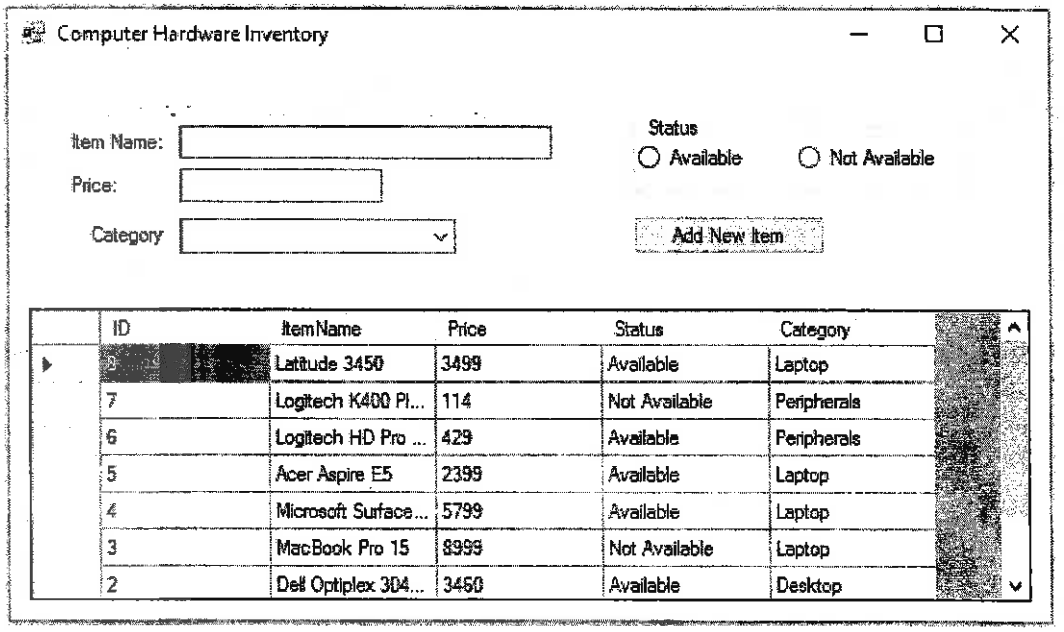
Continued ...

QUESTION 4 (20 Marks)

Create a Windows application that displays the record of Computer Hardware items in the inventory. User can also add a new item into the database.

1. When the application is loaded to memory, records from *ComputerItem* table in Microsoft Access file named ComputerHardware.accdb will be displayed in *DataGridView* named *dvgInventory*. The data is loaded through *OLEDB Data Adapter* into the *DataTable* object called *dtInventory*.
2. User can add a new item into the database through the form controls show below. Please refer to the table below for the names for each form controls in this application

Form Controls	Name
Textbox for Item Name	txtItemName
Textbox for Price	txtPrice
Combo box for Category	cboCategory
Radio button (Available)	radStatusA
Radio button (Not Available	radStatusNA
DataGridView	dvgInventory
Add New Item button	btnAdd



End of Page.